

## **Remarks/Arguments**

Response to the Office action of 1/29/2004, is in accordance with the Patent Examiner sequential comments by section. The following information is provided.

1. The Examiner refers in paragraph 2 of section 1, Paper No. 34, to two groups of claims, Group I and Group II, and states, "Applicant's election filed September 5, 2003 is responsive to paper No. 34. Therefore, remarks should be made to two Groups, not three.

**Applicant's comment:** The Applicant in response to the Office Action of 8/13/03, responded to Group I and Group II only, by letter response dated 8/27/03. Said response was filed by the Patent Office September 5, 2003. Based on the Office Action of 8/13/03 and the requirement of election of Group I or Group II, the Applicant's letter of 8/27/03, elected Group I claims (claims 27, 29, 32 - 36, 38 - 48, 52 - 54) and stated,

"The above election is made without the intention to traverse." The Applicant therefore responded to the requirement of election at that time.

A copy of the previous response to the Office Action of 4/23/2004 was provided at the suggestion of the Examiner in order to replace pages that were compressed due to faulty facsimile reception at the Patent Office.

This copy was not resubmitted for review as part of the response to the Office Action of 8/13/03. Our election of Group 1 claims is reconfirmed herewith as stated in the Applicant's letter of 8/27/2003.

2. **Applicant's response:** Claims 28 and 37 are cancelled as non elected claims in accordance with 37CFR 1.144.

**3. Applicant's response:** Fig. 2j was originally filed with the Application June 24, 1996 by Louis Weinstein, the Attorney of record at that time. A duplicate copy of Fig 2j has been provided to the Patent Examiner.

**4. Applicant's response:** Claim 34 has been amended as noted herein, and no longer depends on claim 27.

**5. The Examiner references 35 U.S.C. 102 (b)** "the invention was patented or described in a printed publication in this or a foreign country or in public use or sale in this country, more than one year prior to the date of application for patent in the United States"

**Applicant's Comment:** As a matter of record, Simon's Patent DE 43 12 136 A1 did not meet the one year requirement of 35U.S.C. 102 (b), and therefore did not take precedence over the Applicant with respect to the Applicant's filing date of April 11, 1994 for the 5,530,558 issued Patent, upon which the Applicant's CIP Application 08669056, is based. Simon's Date of Application was April 14 1993 in Germany. Therefore, the Applicant filed three days before the one year bar became effective.

The reference to the analog connection of Simon cited by the Examiner was not new documentation in the Applicant's CIP, as stated in the following information. The specification documentation and associated Figures in the issued 5,530,558 Patent clearly shows the direct connection for transfer of scanning and print data in Figures 2b, 2c, and 2d. Col. 5, line 64 through Col. 6, line 23, describes the respective Figures.

Col. 5, lines 31 - 63 describes the printing operation of the facsimile machine in combination with the PC. Claim 32 describes a print mode for transferring data from the computer to the facsimile machine for printing. Based on the referenced dates and the content of the issued 5,530,558 Patent, the Applicant does not infringe Simon.

As noted in the Abstract of the 5,530,558 Specification, the invention applies to both scanning and printing, which represents a significant improvement over Simon. These features are further expanded upon herein. However, the Applicant believes that claims referencing printing only would not interfere with Simon, firstly because of the Applicant's filing date, and secondly because the Applicant uses a bi-directional direct connection via a passive link providing a pathway for both analog and digital data to flow for scanning and printing. Simon's invention as noted by the Examiner "applies only to the transfer of analog signals from the computer for printing by the facsimile FK." For these reasons it is believed that the reference to Simon is overcome.

6. Simon does not meet the requirements of 35 USC 102(b) as noted in section 5, and therefore, it is believed that Simon should be removed as a bar to this Application. However, even without the date consideration, the Applicant provides unique inventive differences as stated in section 5. The following additional comments are provided. Your indulgence is requested where comments are repetitive.

**Patent Examiner states:** claims 43 – 48, 53 and 35 are rejected, under 35 U. S. C. 102 (b) as being anticipated by Simon (English translation of German Patent No. DE 43 12 1226 A1).

**Applicant's comment:** It is agreed Simon uses an analog connection to provide a print capability between a PC and a Facsimile (FK), when isolated from the public telephone network. However, Simon is limited to providing analog data transmission in one direction only, that is, from the PC to the facsimile for printing. Whereas, the Applicant's invention enables a bi-directional direct communication link between the PC and the facsimile machine for both print and scanning signals. The Applicant has therefore

provided a significant improvement over Simon and the prior art. This improvement was neither obvious nor anticipated by Simon, or the referenced prior art.

The Applicant's invention enables a single a RS 232; or parallel cable connector to transfer scanning and printing of digital data signals over the same connection between a PC and a facsimile machine. Simon references FIG 2, which shows a print only capability between a PC and a FAX using parallel port connections, and a scanner only capability between a fax and a PC using an RS 232 serial connection.

Simon used only TAE – NFN analog port connectors which cannot transfer RS 232 or parallel digital data signals. Therefore, SIMON is limited to providing only analog print signal transfers.

**The Examiner comments:** Regarding claim 44, note that the direct link between the facsimile FK and the PC is a single, serial link (Fig 3, page 6, the complete paragraph 2).

**Applicant's response:** Claim 44 has been amended to reflect a digital serial data transmission.

Therefore, the Applicant believes claim 44 should be allowed.

**Examiner comment:** Regarding claim 45, Simon also teaches use of a parallel port for parallel communication between the PC and the facsimile machine FK (prior art Fig. 2).

Therefore, parallel data transmissions is not patentable subject matter.

**Applicant's response:** Claim 45 has been amended.

It is agreed that Simon references Fig. 2 for use of a parallel port for parallel communication between the PC and the facsimile machine for a **print function only**, and a separate digital serial connection between the PC and the facsimile (FK) in order to provide a **scanning function only**. However, there is no teaching or suggestion by Simon or the prior art cited, that such connections could provide both a scanning and a

printing function by incorporating a bi-directional scanning and printing capability, when using the parallel connection, and a bi-directional scanning and printing capability, when using the digital serial connection.

It is therefore apparent that the Applicant's invention was not obvious to anyone skilled in the art or it would have been proposed by Simon or indicated in his prior art references. The addition of scanning to a heretofore parallel printer only data transfer connection, and the addition of printing to a heretofore digital serial only data transfer is a major inventive contribution by the Applicant over the referenced prior art.

Claim 45 depends on claim 43 and claim 43 incorporates both scanning and printing, not just printing, therefore the Applicant believes claim 45 should be allowed. Claim 43 and claim 45 have been amended as noted herein.

**Examiner comment:** Regarding claims 46 and 47, the signals being communicated between the direct communication link between the facsimile and the PC are analog signals. Simon's disclosure does not clearly show transfer of digital data between the facsimile FK and the PC. Further, in claim 47, the claim limitation " using analog data transmissions" is taken as the claim limitation for this rejection. Thus the claimed phrase "digital serial, or parallel signals" is not considered.

**Applicant's response:** Claims 46 and 47 have been amended. To avoid further repetition please see the prior responses herein.

Not only is the Applicant's inventive concept unique, but it provides a major economic breakthrough at a fraction of the cost by utilizing simplified circuitry, enabling a facsimile machine to provide a scanning and a printing function over the same cable connection between the PC and the Facsimile machine. Therefore, the Applicant believes claims 46 and 47 should be allowed as amended.

**Examiner comments:** Claim 48 which depends upon claim 43, is rejected in the rejection for claim 43 since "printer" is taken as the claim limitation from the limitation(s) "as a scanner or printer" on line 1 of claim 43, for the purpose of this rejection.

**Applicant's comment:** It is believed claim 48 should be allowed since it depends upon claim 43, which by explanation herein Applicant believes now shows sufficient reason for allowance. Further, please note claim 48 applies to "optically recognizing the scanned data and converting the scanned data into character codes". The Applicant believes the Examiner 's comment is meant to restrict the "printer" portion of the claim not the scanner portion. If this is true, then in addition to the preceding arguments, the scanner portion should be allowed, since it is only the scanner mode which enables data to be transferred from the facsimile machine too the PC for "optically recognizing the scanned data", in accordance with claim 48. Therefore, the restriction would not apply to the scanner portion of claim 48.

**7. Applicant comment:** It is understood that this Application is examined under 35 U.S.C. 102(e), as stated by the Examiner. However, in accordance with the arguments stated herein, the Applicant believes the information provided shows the Applicant's invention is significantly different than the prior art cited, and the basis of the rejection under USC 102(e) should not apply.

**8. Examiner comment:** Claims 27,29,33,35,36,38,40,43,44,47,52,53,and 54 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakamura et al. (U.S. Patent No. 5,608,546), cited in paper No. 4 May 19, 1997.

**Applicant's comment:** Nakamura describes prior art col. 1, line 26-32. The description states, "In connecting a personal computer to a facsimile apparatus, an expansion board provided with an internal register is connected to, for example an RS232C port of the facsimile apparatus. The personal computer is connected to the facsimile apparatus through the expansion board, and the expanded function is allotted to a key of an operation unit of the facsimile apparatus."

Nakamura copied what was already known in the prior art regarding his connection configuration between a PC / FAX. In Fig 2, Nakamura shows callout 14, with an arrow linking it to an RS232C OPTION BOARD (also called an Expansion Board), which contains an internal register referred to in the prior art noted in the previous paragraph. In FIG 4, callout 14 is linked in both directions with an arrow showing the connection with option board 18 and internal register 18a connected to the Personal Computer.

As noted, the prior art did not provide a "passive link" between the PC / FAX, as defined by the Applicant herein, but had an expansion board provided with an internal register located in between the PC / FAX. As previously stated, the expansion board was necessary and integrated with the data flow between the PC / FAX, therefore, data was not directly transferred or transferred through a passive link as suggested by the Examiner.

The Applicant's definition of a "passive link" is one where the initiation of data flow is activated from a set-up procedure within the PC and/or the facsimile machine, and said data is transferred, with no intervening apparatus or signal interception by a processing element or any active component, along the path of an unbroken direct connection between the PC and the facsimile machine, for purposes of providing both scanning or printing data.

Nakamura's patent contribution as stated under his "Summary of Invention", Col. 2, lines 51 – Col. 3, line 37, **applies only to mode settings.**

It is apparent that in Nakamura's patent all of the data flow transfer which occurs between a PC and FAX for scanning or printing depends upon an expansion board with active circuitry including an ASIC, and it is connected between the PC and the FAX. Therefore, Nakamura does not have a **direct connection** enabling digital data signals to flow through a "passive link" between the PC and FAX, as the Applicant does.

**Examiner comments:** "Regarding claim 27, Nakamura et al. discloses a method of using a facsimile apparatus (FAX 1) as scanner and a printer for a personal computer (PC) (Figs. 1 and 2, col. 4, lines 1-45, col. 5, line 40 – col. 6, line 2). In the PC-FAX mode, data is directly transferred or transferred through a passive link from FAX1 to PC. Here a "passive link" is interpreted to mean a communication link without the involvement of a communications network. FAX1 is provided with a port RS-232C, which is a standard digital interface. When FAX1 is used a scanner for PC, an original image read by the reading unit (2) of FAX 1 is transferred as digital data from the FAX 1 port RS-232C to the PC. When FAX1 is used as a printer for PC, digital data transferred from PC to the port RS232C of FAX1. FAX1 and PC are isolated from the public telephone line L (Figs. 1 and 2) and are coupled to each other. PC and FAX 1 are conditioned to receive digital data version of the scanned image from and transmit digital data to port RS232C of FAX1, respectively."

**Applicant's response:** The Applicant agrees that Nakamura shows Fig. 1 with only an RS232C cable between the PC and FAX 1, however Nakamura describes in Fig. 1. Col.4 lines 3 - 5 the **arrangement (Not the way it operates)** of a communications system employing a "facsimile apparatus" which is the first embodiment of the present



invention. Operation is described in Fig 4, Col. 4 lines 64 – to col. 5 line 4. Nakamura describes the condition of a connection; "Referring to FIG. 4 there is shown the condition of a connection between facsimile apparatus FAX 1 and the personal computer PC. To the RS 232C port 14 an expansion board 18 provided with an internal register 18a is connected. To the expansion board 18, the personal computer is connected through the RS-232C cable C so that the facsimile apparatus FAX1 can be used as a facsimile modem." Col. 5, lines 7- 12, " an application specific integrated circuit (ASIC) incorporated in the expansion board 18 is provided with a register to see if the personal computer is on or off. The control unit 1 discriminates the activation condition of the personal computer by sensing a signal from the ASIC."

The ASIC on the expansion board 18 intercepts and/or originates signals, including AT commands along the RS 232 path, linking the fax machine, expansion board 18 and the PC.

This connecting PC / FAX apparatus links to the expansion board 18, which in fact contains a multistage active circuit. This circuit first senses if power is on the PC and then sends go-no-go data signals across the RS 232 wire connection to the control unit 1, contained in Nakamura's facsimile apparatus. If power is on the PC, the control unit 1, then receives the send or receive commands via the expansion board 18 circuitry from the computer and initiates a second stage action by sending or receiving scanning or printing data signals once again via the expansion board 18 interface. The active circuitry of the Expansion board of Nakamura creates an electronic coupling between the PC / FAX. Clearly this is not a "passive link", as defined by the applicant.

The Applicant's definition is therefore significantly different than the Examiners interpretation of Nakamura's "passive link", which is interpreted to mean a "communication link without the involvement of a communications network."

The Applicant provides a true "passive link" as stated in claim 27, as amended, **"with scanned image digital data signals transmitted through a bi-directional direct connection via a passive link between the facsimile machine and the computer."**

The Applicant's step in claim 27 of establishing a "passive link" is separate and different from the step of "by-passing the public switched telephone network", as defined by the Examiner. The Applicant in claim 27 states in separate steps "by-passing or isolating the facsimile machine and the computer from the public network telephone line and; coupling the facsimile machine to the computer;" The latter part of the quote, the separate step "coupling the facsimile machine to the computer" is the portion which applies to the "passive link", as referenced in claim 27.

The structure of claim 27 as quoted shows the intent of separate functions by including (and;).

It is important to note the Applicant's Specification, page 16, lines 26 – 31. **"The analog signals are processed by the control/modem circuitry 76 where they are converted into a digital serial signal and then transmitted through the RS 232 sending interconnect port, the signal is then received by the RS 232 connector at the PC."**

It is evident from this specification description that no intervening apparatus or processing circuitry is required by the applicant as it is by Nakamura. The Applicant's specification applies to both scanning and printing as stated therein on page 16, lines 23 to page 17, line 14.

The Applicant has enabled the transfer of digital data signals for scanning between a PC and a facsimile machine in a simplified way, which has the benefit of being less complex, less costly, and easier to use. There is neither teaching nor remote suggestion by Nakamura that a scanned digital data signal can be transferred between a Facsimile machine and a PC in the manner described by the applicant, without need to require an option board, or expansion board 18 with an internal register, in between the PC and the FAX. Nor is there any suggestion that there is any prior art which teaches the simplified way of using digital signals generated by standard facsimile circuits and subsequently transferring them across a direct connection via a passive link between the facsimile machine and the PC in order to provide a scanning capability, as the Applicant does. Therefore, the Applicant has shown that Nakamura did not anticipate in his claimed modes of operation, nor prior art references, the Applicant's invention.

Nakamura is limited to his application of an RS232 data transfer only, and does not consider other forms of digital data transfer, as does the Applicant. It was neither obvious or understood by Nakamura that data transfer for scanning and printing could be accomplished by using other forms of digital data transmissions, such as parallel transmissions, without the need to interpose his special interface, expansion board 18 between the facsimile machine and the PC. As previously stated the Applicant does not require any intervening apparatus between the PC and the facsimile machine.

Nakamura's, " Brief Description of the Drawings", Fig. 5, in Col. 3, lines 53-54 is described, "Fig. 5 is the flow chart of a processing performed by a control unit of a facsimile apparatus of a first embodiment".

By reference to Col. 4, lines 54-56, Nakamura refers to Fig. 1 as "a first embodiment of the present invention". Therefore, by referring to the description of Fig. 5, Col. 6, lines

53-63, it is clear that expansion board 18 is integrated in the RS 232 cable path between the Fax. 1 and the PC of Fig. 1, and the arrangement shown of Fig.1 do not reflect the actual physical configuration of the operation mode, which is shown in Fig. 4. Therefore, there is no direct connection via a passive link between the Facsimile machine and the PC in Nakamura, as there is in the Applicant's invention.

Based on the above, neither Nakamura, nor the prior art referenced by Nakamura apply to the Applicant's invention and therefore, rejection under 35 U.S.C. 102(e) as being anticipated by Nakamura et al. (U.S. Patent No. 5,608,546), cited in paper No. 4, dated May 19, 1997, is not applicable, in accordance with the information and analysis provided herein.

**9. The Examiner cites 35 U.S.C. 103 (a) which forms the basis for all obviousness rejections set forth in this Office action:**

**Applicant's response:** See section 10 below.

**10. Examiner comment: Claims 41, 42, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (5,608,546) in view of well known art:**

**Applicant's response:**

Significantly, neither Nakamura nor any of his prior art references suggested the use of optical character recognition software in conjunction with facsimile machine scanned images. The Examiner states, "This feature is not specifically disclosed by Nakamura. The Examiner took Official Notice of the fact, conversion of scanned data to character codes to be used in a computer is not novel and is a well known feature in the art of optical character recognition".

It's agreed that optical character recognition (OCR) was well known for **conventional flat bed scanners**, and facsimile machines using conventional dialing systems through the public telephone network. However, the Applicant's invention provides scanned image data from a facsimile machine, through a direct connection via a passive link to a computer, and by - passes the public telephone network, without accruing any telephone charges. **The Applicant's invention is therefore, not a conventional scanner.** The Applicant recognized the advantage of utilizing facsimile machines, most of them having multi sheet feed capability for scanning text images into a computer inexpensively, and combined this capability with OCR. The result was a major economic breakthrough making OCR practical and available to all levels of the market. See the 5,530,558 Patent, Col. 5, lines 21 to 30, and the CIP Specification, page 10, lines 19 – 30. The applicant applied for the 5,530,558 Patent, April 11, 1994. In May of 1994 the technology was introduced at the PC EXPO at the Javits Center in New York City. **This was a novel idea at the time, and was not obvious to anyone skilled in the art prior to the inventions public introduction.**

This indicates the invention improved the use of facsimile machines in conjunction with OCR applications and provided significant novelty and usefulness. At the risk of being redundant, there is no known patent combining OCR applications with scanned facsimile images through a direct connection via a **passive link to a computer, when bypassing the public telephone network, prior to the Applicant's invention.**

In retrospect the rise of the use of OCR was made practical and affordable by the Applicant's invention. In effect, the Applicant's invention was an improvement in technology, resulting in the creation and proliferation of a new market for OCR usage with facsimile machines.

Based on the evidence, it is respectfully requested that rejection under 35 U.S.C. 103(a) be withdrawn.

Claims 41, 42, and 48 have been amended as indicated herein.

**11. Examiner comments:** Claims 32,39, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (5,608,546) in view of Simon (DE 43 12 136, English translation)

**Applicant's comment:** The Examiner suggests that parallel and serial port connectors for connecting a PC to a facsimile machine are not novel features and are therefore not patentable. As stated herein, neither Nakamura nor Simon use a technology, which allows for a direct transfer of scanning and print data between a facsimile machine and a computer through a passive link as defined by the Applicant. It is not just the use of a parallel or serial connector that distinguishes the Applicant. It is the major economic breakthrough of utilizing simplified circuitry to provide bi-directional scanning and a printing capability across the same direct connection via a "Passive Link", which are novel features, representing a significant technological improvement by the Applicant.

Applicant believes that all claims remaining in the application are now in condition for allowance.

Allowance of this application is respectfully requested, in view of the foregoing.

If, however, the Examiner is of the opinion that such favorable action cannot now be taken, it is requested that she telephone the undersigned Applicant in order that any outstanding issue may be resolved without the necessity of a further office action.

Respectfully submitted,



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